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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,233	03/31/2004	Yen-Fu Chen	AUS920031048US4	8121

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EXAMINER

JACOB, MARY C

ART UNIT PAPER NUMBER

2123

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/815,233

Applicant(s)

CHEN ET AL.

Examiner

Mary C. Jacob

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 3/31/04, 7/14/05.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-27 have been presented for examination.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 163.

3. The drawings are objected to because Figure 3 contains 151-8. It would be better if written 151-158. Figure 4 contains 151-6. It would be better if written 151-156.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities. Appropriate correction is required.
5. Paragraphs 0021, 0024 and 0028, refers to 113-5, 103-7 and 123-5. It would be better if these were written 113-115, 103-107 and 123-125.
6. Paragraph 0036, 0037 refers to 151-8. It would be better if written 151-158.
7. It is noted that there are further instances of these informalities noted in the specification and not listed above. It is respectfully requested that Applicant correct these informalities.

Claim Objections

8. Claims 1, 3, 4, 7, 13, 21, 22 and 24 are objected to because of the following informalities. Appropriate correction is required.
9. Claim 1, line 4 recites "a resource profile". Claims 2, 7, and 9 recite "computing resource profile". It is requested that either claim 1 be changed to read "a computing resource profile" or the dependent claims be changed to read "the resource profile" for clarity.

10. Claim 1, line 4 recites "a first subset of computing resources". Claim 3 recites "the subset of computing resources", claim 7 recites "the set of computing resource profile". It is requested that these limitations be revised for clarity.
11. Claim 1, line 8 recites, "the processing", it would be better if written, "simulating processing of..."
12. Claim 3 should have a "." at the end of the claim.
13. Claim 4, line 2 should read, "resource costs, and..."
14. Claim 7 recites "the first set of computing resource profile". It is requested this claim language be revised for clarity, as it is confusing as to whether it should read, "the first subset of computing resources".
15. Claim 13, lines 3-4 recites "a set of *available* computing resources". Line 5 recites "the set of computing resources" and lines 8-9 recite "the subset of computing resources". It is requested that these limitations be revised for clarity to recite either "the set of computing resources" or "the set of available computing resources" and "the subset of available computing resources".
16. Claim 13, line 8 recites "the processing", it would be better if written, "simulating processing of the workload".
17. Claim 21, line 9, "the set of computing resources" would be better if written, "the set of available computing resources".
18. Claims 22 and 24 recite "the set of computing resource profile", it would be better if written "the computing resource profile".

Claim Rejections - 35 USC § 112

19. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

20. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

21. Claim 1, recites the limitation "the enterprise" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim.

22. Claim 2, line 2 recites "a service level agreement". It is unclear whether this is a new recitation of "a service level agreement" or whether this refers to "a service level agreement" recited in claim 1, line 5.

23. Claim 6 recites the limitation "the service level demand" in line 2. There is insufficient antecedent basis for this limitation in the claim.

24. Claim 9 recites the limitation "the expected service level" in line 3. There is insufficient antecedent basis for this limitation in the claim.

25. Claim 13, lines 3-4 recite "a set of available computing resources" and line 5 recites "the set of computing resources". It is unclear whether "the set of computing resources" refers to "a set of available computing resources".

26. Claim 14 recites the limitation "the computing resource profile" in line 4. There is insufficient antecedent basis for this limitation in the claim.

27. Claim 15 recites the limitation "the set of computing resource profile" in line 1. There is insufficient antecedent basis for this limitation in the claim.

28. Claim 16 recites the limitation "the set of computing resource profile" in line 1.

There is insufficient antecedent basis for this limitation in the claim.

29. Claim 19 recites the limitation "the computing resource profile" in line 2. There is insufficient antecedent basis for this limitation in the claim.

30. Claim 19 recites the limitation "the expected service level" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

31. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

32. Claims 1-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

33. Claims 1-20 are directed to a method of predicting service level in a utility computing environment, a system for simulating service in a utility computing environment. This claimed subject matter lacks a practical application of a judicial exception (law of nature, abstract idea, naturally occurring phenomenon) since it fails to produce a useful, concrete and tangible result. Specifically, the claimed subject matter does not produce a tangible result because the claimed subject matter fails to produce a result that is limited to having a real world value rather than a result that may be interpreted to be abstract in nature, as, for example, a thought, a computation or manipulated data. More specifically, the claimed subject matter provides for producing

"a service level result". This produced "result" remains in the abstract and thus, fails to achieve the required status of having a real world value. There is nothing done with the "service level result" after it is "produced". For example, it is not stored anywhere or is it is not displayed to a user to be put to further use in a real world application.

34. Claims 21-27 are directed to a "computer program product", which is functional descriptive material, and fails to recite an appropriate computer readable storage medium to define a structural and functional interrelationship between the computer program and other elements of a computer, which permit the functionality of the computer program to be realized. Therefore, the claims fail to fall within one of the statutory categories. For example, although there is a recitation of a "memory", there are no limitations that recite that the computer program product is stored on the memory and executed by a processor.

Further, this claimed subject matter lacks a practical application of a judicial exception (law of nature, abstract idea, naturally occurring phenomenon) since it fails to produce a useful, concrete and tangible result. Specifically, the claimed subject matter does not produce a tangible result because the claimed subject matter fails to produce a result that is limited to having a real world value rather than a result that may be interpreted to be abstract in nature, as, for example, a thought, a computation or manipulated data. More specifically, the claimed subject matter provides for "logic for signaling whether the computing resource profile will process the workload profile at an expected service level". This produced "result" of the "signaling" remains in the abstract and thus, fails to achieve the required status of having a real world value. The logic will

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produce some value to "signal" that an expected service level is met or not met, however, this "signal" appears to remain embodied within the logic and does not produce an output to a user or does not store this result somewhere for further use in a real world application.

Claim Rejections - 35 USC § 102

35. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

36. Claims 1, 3, 4, 7, 8, 10, 12, 13, 15-18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Chandra et al ("An Online Optimization-based Technique for Dynamic Resource Allocation in GPS Servers", Technical Report UM-CS-2002-030, University of Massachusetts, July 2002).

37. As to Claims 1 and 13, Chandra et al teaches: a method for predicting service level in a utility computing environment having a dynamically allocated subset of computing resources from a set of available computing resources, the method comprising the steps of: creating a resource profile corresponding to a first subset of computing resources allocated according to a service level agreement (page 1, column 2, paragraph 2, lines 18-29; page 2, section A, lines 1-10; pages 2-3, "Problem Definition", paragraphs 1-3; page 7, "Simulation Setup and Workload Characteristics", paragraph 1, lines 1-2; page 9, column 1, lines 4-9); loading a workload profile

representing a demand profile for the enterprise (page 3, "Dynamic Resource Allocation", paragraph 1; page 5, "Workload Prediction Techniques", paragraph 2; page 7, "Simulation Setup and Workload Characteristics", paragraph 2, lines 1-2); and simulating the processing of the workload profile using the resource profile to produce a service level result, wherein the resource profile resource subset is modified during the simulation according to the service level agreement (page 7, "Simulation Setup and Workload Characteristics", paragraph 1, lines 1-2, paragraph 2, lines 1-2; pages 8-9, sections C and C.1; page 10, section C.2, last paragraph).

38. As to Claims 3 and 15, Chandra et al teaches: wherein the subset of computing resources includes allocated processing resources and memory resources for a client account (page 2, section A, lines 1-10, lines 17-21).

39. As to Claims 4 and 16, Chandra et al teaches: wherein the service level agreement includes a base resource allocation (page 3, column 1, lines 1-5; page 4, column 1, "ii"), a maximum resource allocation (page 4, column 1, "ii"), resource costs (page 4, column 1, last 4 sentences-column 2, line 2) and rules for dynamically reallocating the resources based upon workload demand (pages 3-4, "Allocating Resource Shares to Applications", paragraphs 1-2).

40. As to Claims 7 and 17, Chandra et al teaches: wherein the set of computing resource profile also includes communication bandwidth (page 2, section A, lines 17-21).

41. As to Claims 8 and 18, Chandra et al teaches: the step of comparing the workload profile to a second workload profile representing an actual demand profile for

a second client account wherein the simulating step is based upon a result of the comparison step (page 9, section C.2, paragraphs 1 and 2; Figures 8 and 9).

42. As to Claims 10 and 20, Chandra et al teaches: wherein the workload profile includes scheduling information and the simulation step incorporates the scheduling information in the processing (pages 2-3, "Problem Definition", paragraph 3; pages 8-9, section C.1).

43. As to Claim 12, Chandra et al teaches: wherein the workload profile is loaded from a configuration file (page 7, section A, paragraphs 1 and 2).

Claim Rejections - 35 USC § 103

44. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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45. Claims 2, 9, 11, 14, 19, 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chandra et al as applied to claims 1 and 13 above, and further in view of Nagarajan et al ("Modelling and Simulation of An Alarm Based Network Management System for Effective SLA Monitoring and Management", SCI 2003. 7th World Multiconference on Systemics, Cybernetics and Informatics Proceedings, July 27-30, 2003).

46. As to Claims 2, 9, 11, 14, 19, 21 and 26, Chandra et al teaches: predicting service level in a utility computing environment having a dynamically allocated subset of computing resources from a set of available computing resources including: a resource list detailing a set of available computing resources (page 2, section A, lines 1-6) and an allocated resource list detailing an allocated subset of computing resources (page 2, section A, lines 6-10; page 3, column 1, lines 1-6); creating a resource profile corresponding to an allocated subset of computing resources allocated according to a service level agreement (page 1, column 2, paragraph 2, lines 18-29; page 2, section A, lines 1-10; pages 2-3, "Problem Definition", paragraphs 1-3; page 7, "Simulation Setup and Workload Characteristics", paragraph 1, lines 1-2; page 9, column 1, lines 4-9); loading a workload profile representing a demand profile for the enterprise (page 3, "Dynamic Resource Allocation", paragraph 1; page 5, "Workload Prediction Techniques", paragraph 2; page 7, "Simulation Setup and Workload Characteristics", paragraph 2, lines 1-2); and simulating the processing of the workload profile using the resource profile to produce a service level result, wherein the resource profile resource subset is modified during the simulation according to the service level agreement (page

7, "Simulation Setup and Workload Characteristics", paragraph 1, lines 1-2, paragraph 2, lines 1-2; pages 8-9, sections C and C.1; page 10, section C.2, last paragraph). As to logic and memory, it is concluded that since Chandra teaches that the prediction and allocation techniques are simulated using various simulation packages (page 7, section A, paragraph 1), it is understood that memory and logic are present to store the simulation program, algorithms, and system parameters, and that logic is present within the simulation software to perform the simulation operations as disclosed in the limitations.

47. Chandra et al does not expressly disclose: (claims 2, 14 and 21) comparing the service level result to a service level agreement and signaling whether the computing resource profile will process the workload profile at an expected service level corresponding to the service level agreement; (claims 9, 19 and 26) generating a modified service agreement in the event the computing resource profile will not process the workload profile at the expected service level corresponding to the service level agreement, wherein the modified service level agreement will process the workload profile at the expected service level; (claim 11) wherein the workload profile includes information corresponding to one or both of prioritization of resources and importance of specific resources.

48. Nagarajan et al teaches simulation as an important process in documenting service level agreements (SLA) since simulation studies allow an Internet Service Provider (ISP) to verify their SLA agreements and check if it meets customer expectations and whether the specified service could be provided (section 1, paragraph

2, lines 4-6), wherein the simulation techniques include comparing the service level result to a service level agreement and signaling whether the computing resource profile will process the workload profile at an expected service level corresponding to the service level agreement (section 3, last paragraph, lines 10-12; page 5, column 2, lines 3-9; section 6.2, paragraph 1, lines 1-1-9); generating a modified service agreement in the event the computing resource profile will not process the workload profile at the expected service level corresponding to the service level agreement, wherein the modified service level agreement will process the workload profile at the expected service level (Introduction, paragraph 1, lines 10-17, paragraph 2, lines 4-11; page 2, column 2, lines 3-9); wherein the workload profile includes information corresponding to one or both of prioritization of resources and importance of specific resources (page 2, "The type of scenarios examined in this SLA simulation study", items 2 and 3; page 4, column 1, lines 2-7).

49. Chandra et al and Nagarajan et al are analogous art since they are both directed to the testing of an ISP's allocation of resources and whether they satisfy workload demand and the expected service level corresponding to a service level agreement.

50. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the simulating of processing a workload profile using a resource profile to produce a service level result as taught in Chandra et al to further include comparing the service level result to a service level agreement and signaling whether the computing resource profile will process the workload profile at an expected service level corresponding to the service level agreement; generating a modified

service agreement in the event the computing resource profile will not process the workload profile at the expected service level corresponding to the service level agreement, wherein the modified service level agreement will process the workload profile at the expected service level; wherein the workload profile includes information corresponding to one or both of prioritization of resources and importance of specific resources as taught in Nagarajan et al since Nagarajan et al teaches simulation as an important process in documenting service level agreements (SLA) since simulation studies allow an Internet Service Provider (ISP) to verify their SLA agreements and check if it meets customer expectations and whether the specified service could be provided (section 1, paragraph 2, lines 4-6).

51. As to Claim 22, Chandra et al in view of Nagarajan et al teach: wherein the set of computing resource profile comprises: processing resources; and memory resources (Chandra et al: page 2, section A, lines 1-10, lines 17-21).

52. As to Claim 23, Chandra et al in view of Nagarajan et al teach: wherein the computing resource profile further comprises: a base resource allocation (Chandra et al: page 3, column 1, lines 1-5; page 4, column 1, "ii"); a maximum resource allocation (Chandra et al: page 4, column 1, "ii"); resource costs (Chandra et al: page 4, column 1, last 4 sentences-column 2, line 2); and rules for dynamically reallocating the resources based upon workload demand (Chandra et al: pages 3-4, "Allocating Resource Shares to Applications", paragraphs 1-2).

53. As to Claim 24, Chandra et al in view of Nagarajan et al teach: wherein the set of computing resource profile also comprises communication bandwidth (Chandra et al: page 2, section A, lines 17-21).

54. As to Claim 25, Chandra et al in view of Nagarajan et al teach: logic for comparing the workload profile to a second workload profile representing an actual demand profile for a second client account, wherein a simulation produced by the simulation logic is based upon a result of the comparison step (Chandra et al: page 9, section C.2, paragraphs 1 and 2; Figures 8 and 9).

55. As to Claim 27, Chandra et al in view of Nagarajan et al teach: wherein the workload profile includes scheduling information and the simulation logic incorporates the scheduling information in the processing (Chandra et al: pages 2-3, "Problem Definition", paragraph 3; pages 8-9, section C.1).

56. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chandra et al as applied to claim 1 above, and further in view of Chan (US Patent 6,466,898).

57. Chandra et al teaches simulating the processing of a workload profile using a resource profile to produce a service level result.

58. Chandra et al does not expressly teach wherein the simulation is scheduled to run automatically at an off-peak time.

59. Chan teaches an HDL simulator that provides simulation job scheduling on a local and/or remote platform that allows designers to balance the work loads on their network resources by scheduling simulation runs at off-peak hours as well as to

automate the regular regression testing of their designs (column 4, lines 33-39; column 14, line 51-column 15, line 3).

60. Chandra et al and Chan et al are analogous art since they are both directed to the running of simulations.

61. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the simulating of the processing of a workload profile using a resource profile to produce a service level result as taught in Chandra et al to further include scheduling the simulation to run automatically at an off-peak time as taught in Chan since Chan teaches that job scheduling allows designers to balance workloads on their network resources by scheduling simulation runs at off-peak hours (column 4, lines 33-39; column 14, line 51-column 15, line 3).

62. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chandra et al as applied to claim 1 above, in view of Sheets et al (US Patent 6,816,905).

63. Chandra et al teaches a resource profile corresponding to a first subset of computing resources allocated according to a service level agreement, loading a workload profile representing a demand profile for an enterprise and simulating the processing of a workload profile using a resource profile to produce a service level result.

64. Chandra et al does not expressly teach the step of determining a cost associated with meeting the service level demand.

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65. Sheets et al teaches a method and system for operating a hosted service provider for the internet that is capable of dynamically reallocating servers across multiple disparate customer accounts to provide hosted services with a more economical and flexible server farm management (column 6, lines 19-23; column 7, lines 9-13) wherein the cost associated with meeting a service level demand is determined (column 18, lines 60-67).

66. Chandra et al and Sheets et al are analogous art since they are both directed to dynamic reallocation of resources in a shared data center.

67. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the simulating of a workload profile using a resource profile to produce a simulation result as taught by Chandra et al to further include determining the cost associated with meeting a service level demand as taught by Sheets et al since Sheets et al teaches a method and system for operating a hosted service provider for the internet that is capable of dynamically reallocating servers across multiple disparate customer accounts to provide hosted services with a more economical and flexible server farm management (column 6, lines 19-23; column 7, lines 9-13).

Conclusion

68. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

69. Crawford et al ("eModel: Addressing the Need for Flexible Modeling Framework in Autonomic Computing", Proceedings of the 10th International Symposium on Modeling, Analysis and Simulation on Computer and Telecommunications Systems, 2002) teaches on-line workload management, analysis and prediction in an autonomic system wherein an autonomic system component typically monitors and reconfigures itself to comply with SLAs.
70. Chandra et al ("Dynamic Resource Allocation for Shared Data Centers Using Online Measurements", IWQoS 2003, LNCS 2707, pp. 381-398, 2003) teaches dynamic resource allocation techniques including the modeling of server resources and workload and the simulation of the resources with an expected workload.
71. Byde et al ("Market-Based Resource Allocation for Utility Data Centers", Hewlett-Packard Company, HPL-2003-188, September 9, 2003) teaches market-based resource allocation and simulations to test the method of this resource allocation.
72. WOSA for PCT/EP2005/051445 discusses claimed subject matter in view of Nagarajan et al.
73. Eilert et al (US Patent 5,537,542) teaches specification of a performance goal for clients in a client/server data processing system environment and manages the performance of the servers to best meet the performance goals of the clients.
74. Noland et al (US Patent 7,080,378) teaches a method for scaling resources according to workload among virtual servers running on a mainframe computer.
75. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary C. Jacob whose telephone number is 571-272-6249. The examiner can normally be reached on M-F 7AM-5PM.

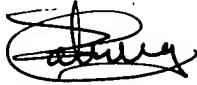
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on 571-272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mary C. Jacob
Examiner
AU2123

MCJ
2/27/07


ZOILA CABRERA
PRIMARY EXAMINER
TECHNOLOGY CENTER 2100

3/1/07